



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,117	12/02/2003	Hanns-Joerg Mauk	0324	3331
112	7590	06/13/2005	EXAMINER	
ARMSTRONG WORLD INDUSTRIES, INC. LEGAL DEPARTMENT P. O. BOX 3001 LANCASTER, PA 17604-3001			SIMONE, CATHERINE A	
			ART UNIT	PAPER NUMBER
			1772	

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/725,117	MAUK ET AL.	
	Examiner	Art Unit	
	Catherine Simone	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 21 March 2005.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1,3-5,7-10,12-16,19,20,23 and 26-34 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1, 3-5, 7-10, 12-16, 19, 20, 23 and 26-34 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) Notice of Informal Patent Application (PTO-152)
6) Other: _____.

DETAILED ACTION

Withdrawn Rejections

1. The 35 U.S.C. 102 rejection of claims 1, 3-5, 7-12, 14, 15 and 24 of record in the Office Action mailed 11/1/04, Pages 2-3, Paragraph #4 has been withdrawn due to the Applicants amendment filed 3/21/05.
2. The 35 U.S.C. 103 rejection of claims 13, 16, 19-23 and 25 over Kupits in view of Hiragami et al. of record in the Office Action mailed 11/1/04, Pages 4-5, Paragraph #6 has been withdrawn due to the Applicants amendment filed 3/21/05.
3. The 35 U.S.C. 103 rejection of claims 17 and 18 over Kupits in view of Dees et al. of record in the Office Action mailed 11/1/04, Pages 5-6, Paragraph #7 has been withdrawn due to the Applicants amendment filed 3/21/05.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
5. Claims 3, 4, 5, 14, 15 and 26-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Kupits (US 3,129,194).

Regarding claim 26, Kupits discloses a floor covering comprising a composition including a binder, a plasticizer and a substance capable of migration within the composition

(waxy substance), the binder comprising polyvinyl chloride (PVC) (see col. 3, lines 10-11), the plasticizer being in an amount of at least 12 wt% based on PVC (see col. 4, lines 62-70), and the amount of the substance capable of migration being in excess of its compatibility in the composition (see col. 6, lines 14-16). Regarding claim 27, the substance capable of migration is present in an amount from about 1.5 wt% to about 15 wt% based on the total amount of the binder (see col. 6, lines 14-16). Regarding claims 28 and 29, the substance capable of migration is a wax-like substance selected from the group of natural and synthetic waxes (see col. 5, line 44 to col. 6, line 10). Regarding claim 30, the wax-like substance comprises an amide wax (see col. 5, line 68). Regarding claim 31, the floor covering further comprises a substrate and a coating (see col. 7, lines 3-5), the coating comprising the binder, plasticizer and substance capable of migration. Regarding claim 3, the floor covering is homogenous (see col. 10, lines 13-15). Regarding claim 4, the floor covering is multi-layered (see col. 7, lines 17-21). Regarding claim 5, the PVC inherently has a K-value from about 40 to about 80, since the PVC is a low molecular weight PVC (see col. 3, lines 73-74). Regarding claim 14, the substrate comprises the same PVC as the PVC of the coating (see col. 7, lines 42-45). Regarding claim 15, the substrate is substantially free of the substance capable of migration and the coating comprises the substance capable of migration in an amount from about 1.5 wt% to about 6 wt% based on the binder of the coating (see col. 6, lines 14-16).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1772

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 7, 8, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kupits (US 3,129,194) in view of Eiden (US 4,336,293).

Regarding claim 1, Kupits discloses a floor covering comprising a composition including a binder, a plasticizer and a substance capable of migration within the composition (waxy substance), wherein the binder comprises polyvinyl chloride (PVC) (see col. 3, lines 10-11), the plasticizer is in an amount of at least about 12 wt% based on PVC (see col. 4, lines 62-70), and the substance capable of migration is present in an amount of from about 1.5 wt% to about 15 wt% based on the binder (see col. 6, lines 14-16). However, Kupits fails to disclose the floor covering having a profile with elevations and recesses, wherein the average spacing between profile peaks in the centerline is more than about 200 μm and less than about 1000 μm , and the difference in height between the elevations and the recesses is from about 20 μm to about 200 μm . Eiden teaches that it is old and well-known in the art to have a polyvinyl chloride floor covering embossed to have a profile with elevations and recesses for the purpose of permitting drainage of liquids from the upper surface of the floor covering (see col. 2, lines 15-22). Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the floor covering in Kupits to have a profile with elevations and recesses as suggested by Eiden in order to permit drainage of liquids from the upper surface of the floor covering. Furthermore, Eiden fails to teach the average spacing between profile peaks in the centerline being more than about 200 μm and less than about 1000 μm , and the difference in height between the elevations and the recesses being from about 20 μm

to about 200 μm . However, Eiden teaches a floor covering with elevations and recesses wherein the difference in thickness between the raised and the depressed portions is at least 1 mm and the preferred wave frequency of the sine wave is 25 mm from peak center to peak center in adjacent waves (see col. 4, lines 51-55 and 60-62). Therefore, the optimum ranges for the average spacing between the peaks in the centerline and the difference in height between the elevations and the recesses would be readily determined through routine experimentation by one having ordinary skill in the art depending on the desired end results. Thus, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the elevations and recesses of the floor covering in Eiden to have an average spacing between profile peaks in the centerline being more than about 200 μm and less than about 1000 μm , and have the difference in height between the elevations and the recesses being from about 20 μm to about 200 μm , since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art in absence of showing unexpected results. *MPEP 2144.05 (II)*.

Regarding claims 7 and 8, the substance capable of migration is a wax-like substance selected from the group of natural and synthetic waxes (see col. 5, line 44 to col. 6, line 10). Regarding claim 10, the wax-like substance comprises an amide wax (see col. 5, line 68). Regarding claim 12, the floor covering further comprises a substrate and a coating (see col. 7, lines 3-5), the coating comprising the binder, plasticizer and substance capable of migration.

8. Claims 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kupits (US 3,129,194) in view of Heiges et al. (US 2,828,219).

Kupits discloses a floor covering comprising a composition including a binder, a plasticizer and a substance capable of migration within the composition (waxy substance), the binder comprising polyvinyl chloride (PVC) (see col. 3, lines 10-11), the plasticizer being in an amount of at least 12 wt% based on PVC (see col. 4, lines 62-70), wherein the substance capable of migration is a wax-like substance (see col. 5, lines 48-51) and the amount of the substance capable of migration is in excess of its compatibility in the composition (see col. 6, lines 14-16). However, Kupits fail to disclose the wax-like substance comprising a plurality of wax-like substances wherein the wax-like substances have different melting points. Heiges et al. teaches that it is old and well-known in the art to have a coating composition comprising two wax-like substances each having different melting points (see col. 1, lines 60-64) for the purpose of producing a coating for a floor covering having good wear and soil resistance. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the coating in Kupits to include at least two wax-like substances having different melting points as suggested by Heiges et al. in order to provide the floor covering with good wear and soil resistance.

9. Claims 16, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kupits (US 3,129,194) in view of Eiden (US 4,336,293) and in view of Hiragami et al. (US 4,501,783).

Kupits further fails to disclose the PVC coating comprising a polymeric particulate material having a hardness greater than the hardness of the PVC of the coating. Hiragami et al. teaches that it is old and well-known in the art to have a polymeric particulate material in the PVC composition (see col. 3, lines 6-9) having a hardness greater than the hardness of the PVC

Art Unit: 1772

for the purpose of producing a resilient PVC floor covering with improved wear and abrasion resistance and non-slip properties. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the PVC composition in Kupits to include a polymeric particulate material having a hardness greater than the hardness of the PVC as suggested by Hiragami et al. in order to produce a floor covering with higher wear and abrasion resistance and non-slip properties.

10. Claims 13, 23 and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kupits (US 3,129,194) in view of Hiragami et al. (US 4,501,783).

Kupits discloses a floor covering comprising a composition including a binder, a plasticizer and a substance capable of migration within the composition (waxy substance), the binder comprising polyvinyl chloride (PVC) (see col. 3, lines 10-11), the plasticizer being in an amount of at least 12 wt% based on PVC (see col. 4, lines 62-70), and the amount of the substance capable of migration being in excess of its compatibility in the composition (see col. 6, lines 14-16). Hiragami et al. teaches that it is old and well-known in the art to have a PVC composition coating having a thickness of about 10 µm to about 100 µm (see col. 6, line 48) and a polymeric particulate material in the PVC composition (see col. 3, lines 6-9) having a hardness greater than the hardness of the PVC and a plurality of the particles of the particulate material protrude above the surface of the PVC (Fig. 1, #2'; also see col. 3, lines 6-9) for the purpose of producing a resilient PVC floor covering with improved wear and abrasion resistance and non-slip properties. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the PVC composition in Kupits to have a thickness of about 10 µm to about 100 µm and consist of a polymeric particulate material

Art Unit: 1772

having a hardness greater than the hardness of the PVC and a plurality of the particles of the particulate material protruding above the surface of the PVC as suggested by Hiragami et al. in order to produce a floor covering with higher wear and abrasion resistance and non-slip properties.

Response to Arguments

11. Applicant's arguments with respect to claims 1, 3-5, 7-10, 12-16, 19, 20 and 23 have been considered but are moot in view of the new ground(s) of rejection.

Regarding new claim 26, Applicant's arguments filed 3/21/05 have been fully considered but they are not persuasive. Applicants argue that "while the release additive of Kupits is the same type of material as the present substance capable of migration and amount of the release additive specified at column 6, lines 12 to 14, of Kupits, overlaps the amount specified in present claim 27, the release additive of Kupits is not in excess of its compatibility in the final floor covering....Present claim 26 is directed to a floor covering with a substance capable of migration in excess of its compatibility and not an intermediate unfused sheet. Again while the release agent in the unfused sheet of Kupits may be in excess of its compatibility, the release agent is absorbed into the principal binder of the fused final floor covering. Therefore, the amount of release agent in the floor covering of Kupits is less than its compatibility".

However, it is to be pointed out that the release additive in Kupits (see col. 5, lines 48-75) is the same type of material as the substance capable of migration in the present application and the amount of the release additive in the composition specified at column 6, lines 12-14 of Kupits does overlap the amount specified in claim 27 of the present application. Therefore,

Art Unit: 1772

Kupits clearly teaches a substance capable of migration and being in excess of its compatibility in the composition. Even if the release additive in Kupits is only in excess of its compatibility in the intermediate unfused sheet and not in the final floor covering formed, it is still being taught in the Kupits reference as being in excess of its compatibility.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Catherine Simone whose telephone number is (571)272-1501. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CAS
Catherine A. Simone
Examiner
Art Unit 1772
June 7, 2005

Harold Pyon
HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

6/8/05